ABSTRACT

Comparison in Corneal Collagen Structure Between 20% Platelet Rich Plasma and 20% Autologous Serum Therapy Post Natrium Hidroksida Exposure.

Marisca, Eddyanto, Nila Kurniasari, Endang Retnowati, Windhu Purnomo

Objective: to compare therapy response between 20% PRP and AS 20% on cornea post sodium hydroxide exposure on collagen structure.

Methods: this is a true experimental study with post test only design on 18 New Zealand white rabbits. Sample were divided randomly to two groups, each with 9 rabbits. The right eye of each rabbit were exposed to alkali injury with 1N NaOH under general anesthesia. First group was given 20% PRP eyedrops and 20% AS for the second group. And the end of the 7 day periode, all rabbits were euthanized and enucleated to obtain histopthological data. Collagen density, collagen thickness and keratosit cell were evaluated. The result will be analyzed, ratio scale data will be tested with independent T- test, and ordinal scaled data will be tested with Mann-Whitney test.

Result: The collagen density in the 20% PRP group shows 88.9% grade 2 and 44.4 % grade 2 for the 20% AS group. The collagen thickness in the 20% PRP group is 55.41 and 67.62 for the 20% AS group. The keratosit cell count in the 20% PRP group are 54.56 and 45.47 in the 20% AS group. There is significant difference in the collagen density between 20% PRP and 20% AS treatment (p= 0.066). There is significant difference in the collagen thickness between 20% PRP and 20% AS treatment (p= 0,224). There is significant difference in the keratosit cell count between 20% PRP and 20% AS treatment (p= 0,227).

Conclusion: From the statistik analysis shows that there is no significant difference in corneal collagen structure between 20% PRP and 20% AS therapy post natrium hidroksida exposure, from our study there is no significant better corneal healing parameters in post alkali chemical ocular injury with 20% PRP eyedrops compare to 20% AS eyedrops.